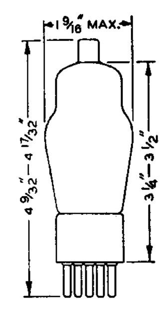
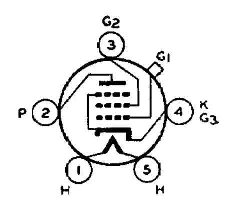
RCA-38



POWER-AMPLIFIER PENTODE

The 38 is a power-amplifier pentode of the heater-cathode type. The relatively low heater current of this type makes it suitable for automobile receivers and for power-line-operated sets, particularly those with a series-heater arrangement.



CHARACTERISTICS

Heater Voltage (A. C. or D. C.)				6.3	Volts
Heater Current				0.3	Ampere
Plate Voltage	100	135	180	250 *max.*	Volts
Screen Voltage	100	135	180	250 *max.*	Volts
Grid Voltage	–9	–13.5	–18	–25	Volts
Plate Current	7	9	14	22	Milliamperes
Screen Current	1.2	1.5	2.4	3.8	Milliamperes
Plate Resistance	0.14	0.13	0.115	0.10	Megohm
Amplification Factor	120	120	120	120	
Transconductance	875	925	1050	1200	Micromhos
Load Resistance	15000	13500	11600	10000	Ohms
Self-Bias Resistor	1100	1100	1100	970	Ohms
Power Output	0.27*	0.55†	1.0*	2.5*	Watts
Grid-Plate Capacitance				0.30	μμf
Input Capacitance				3.5	μμf
Output Capacitance				7.5	μμf
Bulb					ST-12
Cap					Small Metal
Base					Small 5-Pin

* 8% total harmonic distortion.
† 10% total harmonic distortion.

INSTALLATION AND APPLICATION

The **base** pins of the 38 fit the standard five-contact socket which may be installed to hold the tube in any position. For **heater** operation and **cathode** connection, refer to INSTALLATION for type 6A8.

For the **power amplifier** stage of radio receivers, the 38 is recommended either singly or in push-pull combination. Transformer or impedance-coupling devices are preferable. If, however, resistance coupling is used, the d-c resistance in the grid circuit should be limited to 1.0 megohm with plate voltages up to 250 volts, provided the heater voltage does not rise more than 10% above the rated value under any condition of operation.

A plate family of characteristics is given on page 125.